IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

COBBLESTONE WIRELESS, LLC, Plaintiff, v. T-MOBILE USA, INC. Defendant, NOKIA OF AMERICA CORPORATION, ERICSSON INC. Intervenors.	CASE NO. 2:22-cv-00477-JRG-RSP (Lead Case) **JURY TRIAL DEMANDED**
COBBLESTONE WIRELESS, LLC, Plaintiff, v. AT&T SERVICES, INC.; AT&T MOBILITY LLC; AT&T CORP., Defendants, NOKIA OF AMERICA CORPORATION, ERICSSON INC. Intervenors.	CASE NO. 2:22-cv-00474-JRG-RSP (Member Case) JURY TRIAL DEMANDED
COBBLESTONE WIRELESS, LLC, Plaintiff, v. CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS, Defendant, NOKIA OF AMERICA CORPORATION, ERICSSON INC. Intervenors.	CASE NO. 2:22-cv-00478-JRG-RSP (Member Case) JURY TRIAL DEMANDED

JOINT CLAIM CONSTRUCTION CHART

Pursuant to P.R. 4-5 and the Docket Control Order (Dkt. No. 62), Plaintiff, Defendants, and Intervenors file this Joint Claim Construction Chart. This Chart addresses the disputed claim

terms and phrases from the asserted claims of the following patents: U.S. Patent No. 8,891,347 ("the '347 Patent"), U.S. Patent No. 8,094,888 ("the '888 Patent"), and U.S. Patent No. 20,368,361 ("the '361 Patent").

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that this document is being served through CM/ECF on April 16, 2023.

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A. U.S. Patent No. 8,891,347

Asserted Claim of Patent 8,891,347	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
1. A method for wireless communication in a system including a transmitter, a receiver, and a plurality of propagation paths formed between the transmitter and the receiver which are capable of carrying a signal transmitted by the transmitter to the receiver, the method comprising: transmitting a first signal from the transmitter to the receiver via a first propagation path of the plurality of propagation paths; receiving the first signal at the receiver; performing a channel estimation based on the first signal to obtain path parameter information of the first propagation path; sending **the channel estimation that includes the path parameter information** from the receiver to the transmitter via the first propagation path; predistorting a second signal at the transmitter in a time domain, a frequency domain, and a spatial domain, according to the channel estimation based on the first signal; transmitting the predistorted second signal from the transmitter to the receiver via the first propagation path; and receiving the predistorted second signal at the receiver.	"**the channel estimation that includes the path parameter information**" '347 patent, claims 1 and 8	No construction necessary; plain and ordinary meaning.	No construction necessary; plain and ordinary meaning. Defendants contend that "a channel estimation" and "the channel estimation" should receive the same consistent, plain and ordinary meaning	

Asserted Claim of Patent 8,891,347	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
8. A system for wireless communication comprising: a receiver; a transmitter; and a plurality of propagation paths formed between the transmitter and the receiver which are capable of carrying a signal transmitted by the transmitter to the receiver, wherein the receiver is configured to receive a first signal that is transmitted along a first propagation path of the plurality of propagation paths from the transmitter, perform a channel estimation based on the first signal to obtain path parameter information of the first propagation path, and send **the channel estimation that includes the path parameter information** to the transmitter via the first propagation path, and wherein the transmitter is configured to predistort a second signal in a time domain, a frequency domain, and a spatial domain according to the channel estimation that is based on the first signal and received from the receiver and to transmit the predistorted second signal to the receiver via the first propagation path.	"**the channel estimation that includes the path parameter information** " '347 patent, claims 1 and 8	No construction necessary; plain and ordinary meaning.	No construction necessary; plain and ordinary meaning. Defendants contend that "a channel estimation" and "the channel estimation" should receive the same consistent, plain and ordinary meaning	

Asserted Claim of Patent 8,891,347	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
15. A base station for performing wireless communication with a receiver in a wireless device via a plurality of propagation paths, the base station comprising: a transmitter; a computing device; and a computer-readable storage medium having computer-executable instructions stored thereon that are executable by the computing device to perform operations comprising: transmitting a first signal from the transmitter to the receiver via a first propagation path of the plurality of propagation paths; receiving a channel estimation based on the first signal, **the channel estimation including path parameter information** of the first propagation path; predistorting a second signal in a time domain, a frequency domain, and a spatial domain according to the channel estimation based on the first signal; and transmitting the predistorted second signal from the transmitter to the receiver via the first propagation path.	"**the channel estimation including path parameter information**" '347 patent, claim 15	No construction necessary; plain and ordinary meaning.	No construction necessary; plain and ordinary meaning. Defendants contend that "a channel estimation" and "the channel estimation" should receive the same consistent, plain and ordinary meaning	

B. U.S. Patent No. 9,094,888

Asserted Claim of Patent 9,094,888	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
20. A system for a wireless device handoff between a first wireless network and a second wireless network, the system comprising: an antenna array configured to generate one or more adaptable beams to modify a coverage area for the first wireless network; and an **adaption manager** having logic, the logic configured to: receive a handoff request from the second wireless network, the handoff request based, at least in part, on a determination by the second wireless network that the wireless device is capable of being covered by the first wireless network, cause a beam from among the one or more adaptable beams to be adapted in order to enable the wireless device to be covered by the first wireless network, and transmit a confirmation to the second wireless network to indicate acceptance of the handoff request, wherein the wireless device is handed off from the second	"**adaption manager**" '888 patent, claim 20	No construction necessary; plain and ordinary meaning; not subject to means-plus-function treatment under §112(6) and not indefinite under §112(6). If counterfactually § 112(6) were to apply, not indefinite: **Functions**: receive a handoff request from the second wireless network, the handoff request based, at least in part, on a determination by the second wireless network that the wireless device is capable of being covered by the first wireless network; cause a beam from among the one or more adaptable beams to be adapted in order to enable the wireless device to be covered by the first wireless network; transmit a confirmation to the second wireless network to indicate acceptance of the handoff request, wherein the wireless device is handed off from the	Indefinite under § 112, ¶6.	

Asserted Claim of Patent 9,094,888	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
wireless network to the first wireless network.		second wireless network to the first wireless network. **Structure**: adaption manager 122 (FIGs. 1A-1C, 3, 5-7, 4:4-6, 5:18-20, 6:18-7:23, 8:65-10:13, 12:23-13:28,13:62-15:45, and/or corresponding figures and equivalents.		
12. A method according to claim 9, wherein the adapting one or more beams comprises adapting one or more beams based, at least in part, on one of a **predetermined network load** placed on the first wireless network due to the handoff of the wireless device or an effect of adapting one or more beams on other wireless devices currently communicatively coupled to the first wireless network.	"**predetermined network load**" '888 patent, claim 12	No construction necessary; plain and ordinary meaning; not indefinite under 35 U.S.C. § 112.	Indefinite.	

C. U.S. Patent No. 10,368,361

Asserted Claims of Patent 10,368,361	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
10. A wireless base station for a wireless communication network, the wireless base station comprising: a **quality status module configured to determine a respective quality status of a first frequency spectrum resource and a second frequency spectrum resource**, wherein each of the first frequency spectrum resource and the second frequency spectrum resource are associated with an air interface that is available for use by the wireless base station for an uplink channel or a downlink channel; a processor coupled to the quality status module and configured to: determine, based on the quality status of the first frequency spectrum resource, that the first frequency spectrum resource is a **sub-optimal resource**, for the uplink channel and the downlink channel, relative to other frequency spectrum resources that are available for use by the wireless base station; and in response to the determination that the first frequency spectrum resource is the **sub-optimal resource**, assign the first	"**quality status module configured to determine a respective status of a first frequency spectrum resource and a second frequency spectrum resource**" '361 patent, claim 10	No construction necessary; plain and ordinary meaning; not means-plus-function term governed by §112(6). If counterfactually § 112(6) were to apply: **Function:** determine a respective quality status of a first frequency spectrum resource and a second frequency spectrum resource, wherein each of the first frequency spectrum resource and the second frequency spectrum resource are associated with an air interface that is available for use by the wireless base station for an uplink channel or a downlink channel **Structure:** Processor with software running an algorithm to execute measurement of "channel	Means-plus-function term governed by § 112(6). **Function:** determine a respective quality status of a first frequency spectrum resource and a second frequency spectrum resource, wherein each of the first frequency spectrum resource and the second frequency spectrum resource are associated with an air interface that is available for use by the wireless base station for an uplink channel or a downlink channel **Structure:** Processor with software running an algorithm to execute measurement of "channel quality indicator (CQI), received interference power (RIP), and/or any other suitable quality metric or key performance indicator, such as RSSI, acknowledgment/negative	

Asserted Claims of Patent 10,368,361	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
frequency spectrum resource to a **shared resource pool**; and a scheduler module coupled to the processor and configured to: schedule the second frequency spectrum resource for the uplink channel or the downlink channel based on an initial directional allocation of frequency spectrum resources for the wireless base station; determine an updated directional allocation of frequency spectrum resources for the wireless base station after the second frequency spectrum resource is scheduled for the uplink channel or the downlink channel; and schedule the first frequency spectrum resource based on the updated directional allocation of frequency spectrum resources for the wireless base station.		quality indicator (CQI), received interference power (RIP), and/or any other suitable quality metric or key performance indicator, such as RSSI, acknowledgment/negative acknowledgement (ACK/NACK) frequency, dropping rate, block error rate, bit error rate, signal-to-interference-plus-noise ratio (SINR), and equivalents.	acknowledgement (ACK/NACK) frequency, dropping rate, block error rate, bit error rate, signal-to-interference-plus-noise ratio (SINR), etc." 4:29-34.	
	"**shared resource pool**" '361 patent, claims 10, 11, 17	No construction necessary; plain and ordinary meaning, which is a pool containing one or more frequency spectrum resources that can be scheduled for uplink or downlink channels.	A pool containing one or more sub-optimal frequency spectrum resources that can be scheduled for uplink and downlink channels.	
	"**sub-optimal resource**" '361 patent, claims 10 and 17	No construction necessary; plain and ordinary meaning; not indefinite under 35 U.S.C. § 112.	Indefinite.	

Asserted Claims of Patent 10,368,361	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
11. The wireless base station of claim 10, further comprising: a memory coupled to the processor and configured to store an uplink resource pool, a downlink resource pool, and the **shared resource pool**, wherein the processor is further configured to assign, based on the determined quality status of the second frequency spectrum resource, the second frequency spectrum resource to one of the uplink resource pool or the downlink resource pool.	"**shared resource pool**" '361 patent, claims 10, 11, and 17	No construction necessary; plain and ordinary meaning, which is a pool containing one or more frequency spectrum resources that can be scheduled for uplink or downlink channels.	A pool containing one or more sub-optimal frequency spectrum resources that can be scheduled for uplink and downlink channels.	
17. A non-transitory computer-readable medium that includes computer-executable instructions stored thereon, which in response to execution by a processor, cause the processor to perform or control performance of operations that comprise: determine a quality status of a first frequency spectrum resource that is available for use by a base station for an uplink channel or a downlink channel; determine, based on the quality status, that the first frequency spectrum resource is a **sub-optimal resource**, for the uplink channel and the downlink channel, relative to other frequency spectrum resources that are available for use by the base station,	"**shared resource pool**" '361 patent, claims 10, 11, and 17	No construction necessary; plain and ordinary meaning, which is a pool containing one or more frequency spectrum resources that can be scheduled for uplink or downlink channels.	A pool containing one or more sub-optimal frequency spectrum resources that can be scheduled for uplink and downlink channels.	
	"**sub-optimal resource**" '361 patent, claims 10 and 17	No construction necessary; plain and ordinary meaning; not indefinite under 35 U.S.C. § 112.	Indefinite.	

Asserted Claims of Patent 10,368,361	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
wherein to determine that the first frequency spectrum resource is the **sub-optimal resource**, the computer-executable instructions, in response to execution by the processor, cause the processor to perform or control performance of at least one operation that comprises: determine that a channel quality indicator (CQI) of the first frequency spectrum resource is less than a respective CQI of one or more other frequency spectrum resources that are available for use by the base station; and determine that a received interference power (RIP) of the first frequency spectrum resources is greater than a respective RIP of the one or more other frequency spectrum resources that are available for use by the base station; in response to the determination that the first frequency spectrum resource is the **sub-optimal resource**, assign the first frequency spectrum resource to a **shared resource pool**; schedule, based on an initial directional allocation of communication resources for the base station, a second frequency spectrum resource that is available for use				

Asserted Claims of Patent 10,368,361	Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Construction
by the base station for the uplink channel or the downlink channel; after the second frequency spectrum resource is scheduled for use by the base station, determine an updated directional allocation of communication resources for the base station; and select the first frequency spectrum resource from the **shared resource pool**, and schedule the first frequency spectrum resource for either the uplink channel or the downlink channel based on the determined updated directional allocation of communication resources for the base station.				